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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/656,313

09/05/2003

Harald Bauer

2002DE130

8221

25255

7590

03/03/2009

CLARIANT CORPORATION  
INTELLECTUAL PROPERTY DEPARTMENT  
4000 MONROE ROAD  
CHARLOTTE, NC 28205

EXAMINER

CHEUNG, WILLIAM K

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

03/03/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/656,313	<b>Applicant(s)</b> BAUER ET AL.	
	<b>Examiner</b> WILLIAM K. CHEUNG	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 December 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3-5,21,22,40 and 41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-5,21,22,40 and 41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                      |                                                                   |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____                                                          | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

1. In view of the amendment filed December 3, 2008, claims 2, 6-20, 23-39, 42 have been cancelled. Claims 1, 3-5, 21, 22, 40, 41 are pending.
2. In view of the amendment filed December 3, 2008, the rejection of Claims 1, 23, 42 under 35 U.S.C. 103(a) as being unpatentable over Weil et al. (US Pat. 5,578,666) in view of Clignet (US 6,475,972), is withdrawn.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

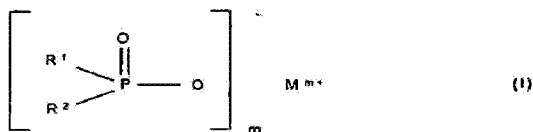
The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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4. Claims 1, 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weil et al. (US Pat. 5,578,666) in view of Clignet (US 6,475,972), and further in view of Jenewein et al. (US Pat. 6,365,071).

1. (Currently Amended) A pulverulent flame-retardant composition with low dust level, comprising an organophosphorus flame retardant component, and at least one dust-reduction additive, wherein the at least one dust reduction additive is non-aqueous, and wherein the dust-reduction additive comprises alkylalkoxylates having from 8 to 22 carbon atoms and from 1 to 80 EO units per mole of alcohol, wherein the organophosphorus flame-retardant component is a phosphinic salt of the formula (I)



wherein

R<sup>1</sup> and R<sup>2</sup> are identical or different and are C<sub>1</sub>-C<sub>6</sub>-alkyl, linear or branched, or aryl;

M is Mg, Ca, Al, Sb, Sn, Ge, Ti, Zn, Fe, Zr, Ce, Bi, Sr, Mn, Li, Na, K, and a protonated nitrogen base;

m is from 1 to 4; and

x is from 1 to 4; and;

wherein the ratio of amount of dust-reduction additive to that of organophosphorus flame-retardant component is from 1:99 to 10:1.

The prior art to Weil et al. provides a flame retardant composition comprising organophosphate (Abstract). Paraffin waxes are also included in the composition (column 4, lines 27-30). Although the paraffin waxes are used as a moisture resistance aid additive in the prior art application, the prior art flame retardant composition would have the low dust level because paraffin waxes have the ability to suppress dust, which is taught by Langford (US Pub. 2001/0011112), on page 2, [0012] and page 4, [0046].

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The 103 rejection over multiple references has been held to be proper when the extra references are cited to show that a characteristic not disclosed in the primary reference is inherent. See *Atlas Power Co. v. IRECO, Inc.*, 190 F.3d 1342, 1349, 51 USPQ2d 1943, 1948 (Fed. Cir. 1999). Also see MPEP §§ 2131.01.

The difference between the invention of claims 1, 3-5 and Weil et al. is that Weil et al. are silent on a composition comprising an alkylalkoxyoxylate.

Clignet (col. 2, line 40-45) discloses a composition that comprises C<sub>10</sub>-C<sub>22</sub> alkyl alkoxyates, particularly ethoxyates, typically containing 20 to 100 alkoxyate, particularly ethoxyate (col. 2, line 40-45), motivated by the expectation of success that the composition of Clignet (col. 5, line 37-48) can be processed to produce particles with reduced fines and modestly increased in the average particle size, which in effect reduces dusting problems, it would have been obvious to one of ordinary skill in art to incorporate the alkyl alkoxyates teachings of Clignet into Weil et al. to obtain the invention of claims 1, 3-5.

The prior art to Weil et al. is adequately presented in above in this Office Action and is incorporated herein by reference. Weil et al. also teach that the composition may be blended with a normally flammable thermoplastic or elastomeric crosslinked polymers to confer flame retardant (Weil' 666, column 2, lines 11-13). The normal flammable polymers include polyesters (Weil' 666, column 2, line 56).

The difference between the prior art and the present application is that the organophosphorus used by Weil et al. is different from the instantly claimed phosphinic salts.

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The prior art to Jenewein et al. is adequately set forth in the previous Office Action dated January 18, 2005 and is incorporated herein by reference. Jenewein et al. teach a flame retardant combination comprising phosphinic salts which meet the requirement of the instant claims 1, 3-5. See the previous Office Action dated January 18, 2005, page 7-8. Jenewein et al. disclose that the invented flame retardant combination is used for thermoplastic polymers (Abstract). Jenewein et al. also disclose that calcium phosphinates and aluminum phosphinates have proven particularly effective in polyesters (column 2, lines 31-32).

Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the phosphinic salt, as taught by Jenewein et al., in place of the organophosphate in Weil et al.'s flame retardant composition formulation, for polyester thermoplastic polymer in particular, based on Jenewein et al.'s teaching of such phosphinic salt being particularly effective in polyesters as a flame retardant and motivated by a reasonable expectation of success.

5. Claims 21-22 and 40-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weil et al. (US Pat. 5,578,666) in view of Clignet (US 6,475,972), in view of Jenewein et al. (US Pat. 6,365,071), and further in view of Gareiss et al. (US Pat. 6,084,012).

The prior art to Weil et al. is adequately presented in paragraph 4 in instant Office Action and is incorporated herein by reference.

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The difference between the prior art and the present application is that Weil et al. do not disclose the requirement for the particle size of the flame retardant composition in the blending process.

The prior art to Gareiss et al. is adequately set forth in the previous Office Action dated January 18, 2005 and is incorporated herein by reference. The prior art to Gareiss et al. relates to a flame resistant thermoplastic molding material comprising (A) a thermoplastic polymer, (B) red phosphorus, and (C) other additives (Abstract). Gareiss et al. teach that the mean particle size of the phosphorus particles distributed in the molding compositions is usually up to 2mm, preferably from 0.0001 to 0.5 mm (0.1 to 500  $\mu\text{m}$ ) (column 7, line 30-32) as required by Claim 21. Gareiss et al. further teach, in their working examples, that the mean particle size of the phosphorus is 45  $\mu\text{m}$  (column 13, line 39) as required by Claim 40.

As to the limitations of the bulk density in Claims 22 and 41, both Weil et al. and Gareiss et al. are silent as to the bulk density of the flame-retardant composition. However, given the substantially identical flame-retardant composition between the prior arts and the present invention, it is the examiner's position to believe that the prior art composition must inherently possess the same bulk density. Since the PTO does not have proper means to conduct experiments, the burden of proof is now shifted to the applicant to establish an unobviousness difference. *In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977); *In re Fitzgerald*, 205 USPQ 594 (CCPA 1980).

***Response to Arguments***

6. Applicant's arguments filed December 3, 2008 have been fully considered but they are not persuasive. Applicants argue that the amended claims are allowable since claim 1 contains all the features of claim 2. However, the examiner disagrees in view of the rationale set forth from paragraphs 4 and 5 of instant office action.

***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William K. Cheung whose telephone number is (571)



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272-1097. The examiner can normally be reached on Monday-Friday 9:00AM to 2:00PM; 4:00PM to 8:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David WU can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/William K Cheung/  
Primary Examiner, Art Unit 1796

William K. Cheung, Ph. D.  
Primary Examiner  
February 23, 2009